REMARKS

After entry of this Amendment, Claims 1-18 will be all the claims pending in the application. Claims 1-2, 8-9, and 11-12 have been amended. Claim 18 is new. Support for the amendments to Claims 1-2, 8-9, and 11-12 may be found in the specification, e.g., at page 7, lines 8-25, in Figure 7, and at page 61, lines 8-10. Support for new Claim 18 may be found in the specification, e.g., at page 7, lines 8-25, and in Claim 1.

No new matter has been added.

Entry of the above amendments is respectfully requested.

Preliminary Matters

Applicants thank the Examiner for acknowledging Applicants' election without traverse of Group I (Claims 1-9) in the Response filed June 12, 2008.

Response to Claim Rejection - 35 U.S.C. § 112

On page 2 of the Office Action, Claims 1-9 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

In response, and while not admitting that the rejection is appropriate, Claims 1-2 and 8-9 have been amended to recite "a cell array substrate having a cell adhesiveness variation pattern that comprises a first region where at least part of population of the cells adhere and a second region where the at least part of population of the cells do not adhere, to give a cell array substrate with the cells adhered to the first region in a patterned state...." Support for the amendments to Claims 1-2 and 8-9 may be found in the specification, e.g., at page 7, lines 8-25, which describes two distinct regions having different degrees of cell adhesiveness.

Withdrawal of the rejection is respectfully requested.

Response to Claim Rejection - 35 U.S.C. § 102

On page 3 of the Office Action, Claims 1-2 and 7-8 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Nelles et al. (U.S. 2002/0095219) "in light" of Sigma-Aldrich (2008), Tarone et al. (1982), and Taguenang et al. (2006).

Initially, Applicants respectfully point out that in view of their respective publication dates, the Sigma-Aldrich and Taguenang references are not proper references under 35 U.S.C. § 102(b).

Next, in response, and while not admitting that the rejection is appropriate, Claim 1 has been amended to recite that the transferring step comprises removing the cells from the regions having acquired or increased cell adhesiveness without enzymatic degradation or lowering temperature. Support for the amendment can be found in the specification, e.g., in Figure 7, and at page 61, lines 8-10.

Further, Applicants submit that while the cell transferring method of the present invention is a simple cell migration from the cell adhesion regions to cell culture substrate using the gradient of the cell adhesion strength, such step of Nelles requires transferring matrix in which cells are embedded. *See* [0019]-[0022] of Nelles. In order to remove the matrix adhesion from cells, Nelles requires enzymatic degradation and/or lowering the temperature below the gel-translation temperature. *See* [0023]-[0025] and [0037]. On the other hand, the present invention eliminates the step of enzyme treatments or the like to transfer cells from a carrier for cell culture, so that damage to cells can be prevented. *See* lines 8-10, page 61 of the specification.

Accordingly, Applicants submit that Nelles does not disclose or suggest all of the claim limitations, and Claim 1 is not anticipated by Nelles. Further, Claims 2, 7, and 8 are patentable at least by virtue of their dependency from Claim 1.

Withdrawal of the rejection is respectfully requested.

Response to Claim Rejection - 35 U.S.C. § 103

On page 5 of the Office Action, Claims 1-9 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Nelles in view of Kobayashi *et al.* (US 6,294,313, "Kobayashi") and Georger *et al.* (US 5,324,591, "Georger"). Applicants traverse the rejection for the following reasons.

A *prima facie* case of obviousness has not been established because none of Nelles, Kobayashi, or Georger, alone or in combination, teach or suggest all of the claimed limitations of the invention, either explicitly or inherently. In particular, these documents do not expressly or inherently teach removing the cells from the regions having acquired or increased cell adhesiveness without enzymatic degradation or lowering temperature.

All of Claims 2-9 share the common feature from Claim 1 of the transferring step which comprises removing the cells from the regions having acquired or increased cell adhesiveness without enzymatic degradation or lowering temperature. Applicants submit that this feature is not taught at all in the Nelles, Kobayashi, and Georger references, nor do these documents suggest the benefit of such cell transferring method.

Nelles does not teach or suggest removing the cells from the regions having acquired or increased cell adhesiveness without enzymatic degradation or lowering temperature because Nelles's cell transferring step requires transferring matrix along with cells, and enzymatic degradation and/or lowering temperature is required to detach the matrix from cells.

Kobayashi does not teach or suggest removing the cells from the regions having acquired or increased cell adhesiveness because Kobayashi does not even disclose any cell.

Georger does not teach or suggest removing the cells from the regions having acquired or increased cell adhesiveness because Georger keeps growing cells on the adhesive regions and never transfers them.

Accordingly, because the cited documents do not teach all of the claim limitations, there can be no reasonable expectation of success in combining the cited documents to arrive at the claimed invention. Thus, these documents combined do not support a *prima facie* case of obviousness.

Additionally, with regard to Claim 9, Applicants submit that the alteration in the width and distance of regions having acquired or increased cell adhesiveness is not routine optimization for the following reasons.

With a line width determined within the numerical range as recited in Claim 9, vascular endothelial cells can efficiently form a tubular tissue, and through the formation of such cell adhesiveness variation pattern, vascular endothelial cells are caused to adhere and then transferred in a linear pattern efficiently form a tissue (that is, a linear capillary vessel), and the cells can be prevented from extending pseudopodia between the lines at the time of their tissue formation, which would distort the lines (*see* page 12, lines 18-26 of the specification).

Accordingly, Applicants submit that alteration in the width and distance of regions having acquired or increased cell adhesiveness is not a routine optimization.

Withdrawal of the rejection is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

Joseph Hsiao
Registration No. 51,822

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
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CUSTOMER NUMBER

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